

REMARKS

The new species closely resembles *Creightonella albifrons* (Smith), however, *albifrons* distinctly differs from *mittelli* in : interspace in between 2nd and 3rd mandibular tooth being wider, and the latter one being obtuse; wings apical half dark fuscous and basal half subhyaline; front tarsi simple and unmodified; apical fasciae on tergite 1st to 4th complete and continuous; carina of 6th tergum broadly rounded with 8 terminal obtuse teeth, medio-longitudinal ridge prominent up to the margin of carina; apical margin of sternite 5th not in-

vaginated medially; in 8th sternite apical lobe rounded; gonostyli parallel sided and gonobase prominent.

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A NEW SPECIES OF GENUS *ANTHOCOPA* LEPELETIER AND SERVILLE (HYMENOPTERA : APOIDEA : MEGACHILIDAE), FROM ORISSA, INDIA¹

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(With six text-figures)

Anthocopa anonyma, *A. cathena*, *A. indostana* (all by Cameron) and *A. matheranensis* Michener were earlier described from within Indian limits. *A. auriculata* a new species, has been described for the first time from Konark (Orissa). It has some close affinities to *A. indostana*.

The Genus *Anthocopa* Lepeletier and Serville in the strict sense of Michener (1941, 1944), was earlier represented by 4 species from India, namely: *anonyma*, *cathena*, *indostana* (all by Cameron 1904, described in genus *Megachile* Latr., from Deesa, Sind) and *Matheranensis* Michener (1966, from Pune). Before proceeding to the description of the new species, I wish to en-

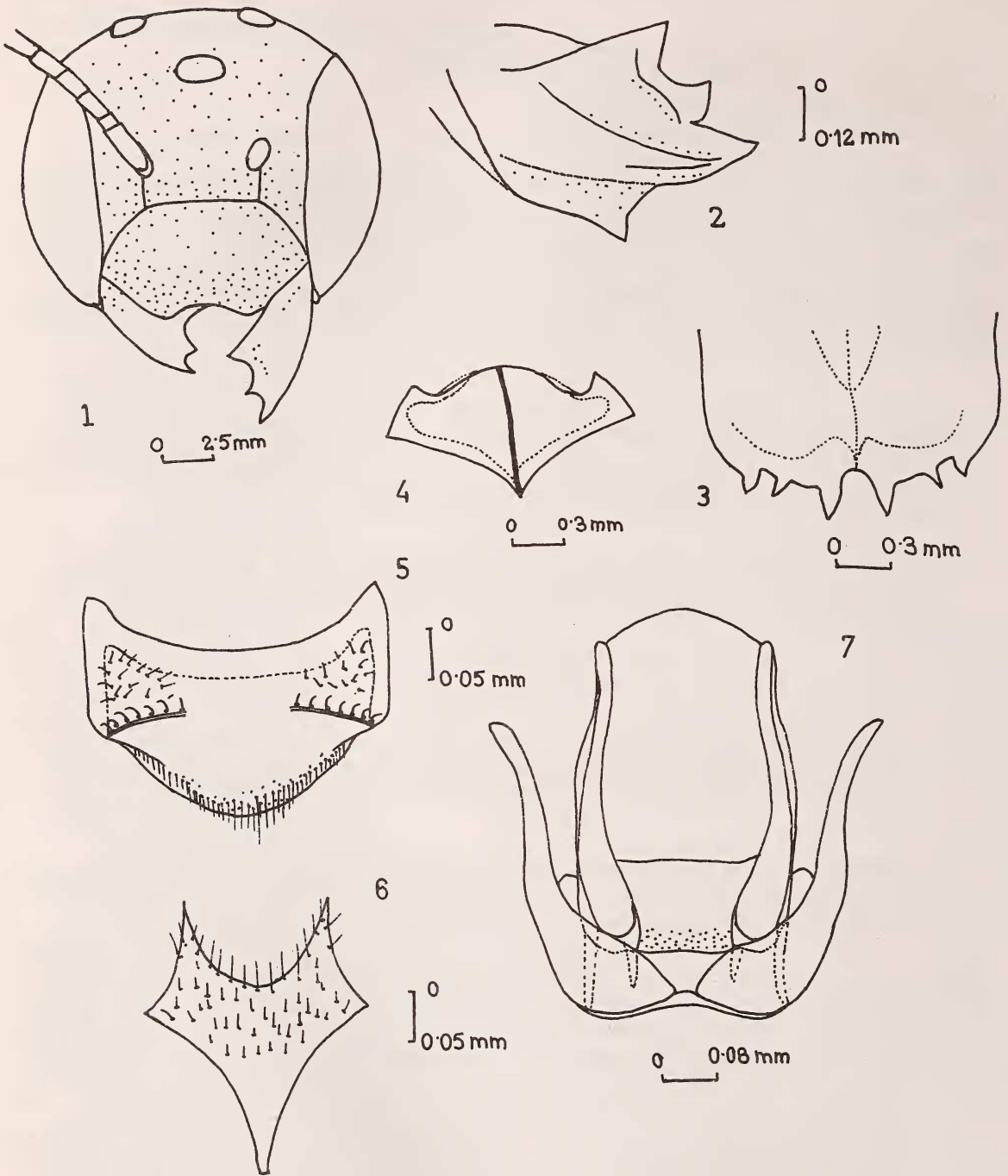
umerate the distinct characteristics of genus-*Anthocopa*, which separate it from the closely related genera *Hoplitis* Klug and *Osmia* Panzer.

"Small, robust, black bees with dense pubescence cover on face, legs and mesosoma; scutellum normal in profile or slightly above to oblique (not so much as in *Osmia*), usually metanotum moves upto the upper longitudinal line of mesosoma; parapsidal lines linear and distinct; anterior face of mesepisterna not separated from the lateral one with a carina or ridge; legs with distinct arolia; pregradular area of second tergum broadly-shallowly concave transversely; gradulus of second tergum may be-

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³ After the golden pubescens of the body.



Anthocopa auriculata sp. nov.

Male: 1. Head, front view; 2. mandible; 3. sternum VIth; 4. sternum VIIth; 5. sternum VIIIth; 6. genitalia. (Dots on Figs. 1 & 2 indicate pubescence).

subcarinate; seventh tergum of male with conspicuous posterolateral teeth".

*Anthocopa auriculata*³ sp. nov.

MALE: Integument black, feebly shining, legs brownish red, tegulae testaceous; eyes black; punctures fine and uniformly close; pubescence golden all over the body, face completely covered with hairs.

Head wider than the median length; inner eye margins strongly convergent below, straight and with prominent carina; clypeal margin laterally acutely angulate, outcurved but medially with a short concavity; vertex unevenly flat, ocellar triangle not elevated, occipital margin incarinate; maximum width of genae less than eye width in lateral view, feebly narrowed above; mandible tridentate, apical tooth much produced, lower margin with a basal process.

Scutum surface broadly convex, fine punctures inter-connected; pronotal ridge low & obscure; scutellar surface resemble scutum, posterior margin broadly rounded; tegulae with dense pubescence; first recurrent vein far from the base than the second one which is comparatively close to the apex, of second cuboital cell of fore wing; front coxae spinose, inner margins of all coxae incarinate; legs in general are normal, finely punctured but with remarkable long pubescence; tarsi unmodified, claws bifurcated with an arolium in between.

Basal tergal concavity margin semicarinate; apical margins fasciate from first to fifth tergites; carina of VIth tergum angulate from basal region, with a pair of blunt median spines and another pair at lateral extremities, acutely produced; apical margin of VIIth tergum strongly recurved and lyriate medially, spines are feebly markable at lateral extremities only; basal sternum broadly expended, fasciate, apical margin feebly invaginated medially; margins of IInd to IVth sternites slightly outcurved, all fasciate, but in Vth, margin at midline deeply incurved and fasciae at this incurve absent; sternite VIth and onwards eclipsed under Vth; margin of VIIIth not fringed, with very few setae on quadrate apical lobe.

Apices of gonocoxites divergent, setose and strongly angulate; stipites of penis valve globulate at apex.

Measurements: (in mm.): Total length 7.0; eyes: length 1.8, lateral width 0.92; clypeus; median length 0.52, basal and apical widths 0.52 and 1.3; antennal sockets; distance to clypeus, to median ocellus, to eye and to each other 0.55, 0.55, 0.3, 0.55; antennae: length of scape 0.45, pedicel 0.12, flagellar segments Ist 0.12, IInd 0.18, VIth 0.3 and XIth 0.32, breadths of VIth 0.18 and XIth 0.18; labrum: median length 0.6, basal and apical widths 0.6 and 0.5; labial palpi: lengths of segments Ist 0.28 and IInd 0.28; scutum: median length and maximum width 1.12 and 1.92; scutellum: median length of dorsal surface 0.5; fore wing: length of radial cell 1.25 and total length 4.9; relative widths of tergite Ist to VIth 1.25, 1.9, 2.05, 2.12, 2.12 and 1.4.

FEMALE: not known.

Material examined: Holotype Male, Konark (Orissa), m.s.l. 16. 8. 1981, Coll. Rajiv K. Gupta, (on wing); Paratype 1 Male same data as for holotype (holotype at N.P.C., Division of Entomology, I.A.R.I., New Delhi, Paratypes will be placed at the same museum, soon).

REMARKS

The new species is quite separate from *matheranensis* (very long proboscis, reaching up to hind coxae in repose), but *indostana* seems to be a close relative of *auriculata* sp. nov. in respect of the short proboscis, merely reaching upto front coxae in repose and the much produced apical tooth of tridentate mandible. Michener (1966) has expressed the probability of *anonyma* and *indostana*, being the same species on the basis of characters of head and thorax, since the type specimen of *anonyma* male lacks the abdomen. However, *indostana* distinctly differs from *auriculata* in: truncated clypeal margin; mandible without a basal process at lower margin; tegulae smooth; carina of VIth tergum with a prominent median projection and one on either sides feebly markable; tergum VIIth with distinct short spines at apical margin; stipites of genitalia not so broadly

globulate at apices and gonostyli not angulate apically; body pubescence white and punctures on whole body not so uniformly fine.

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TWO NEW SPECIES OF HARPACTORARIA FROM SOUTHERN INDIA (HETEROPTERA: REDUVIIDAE: HARPACTORINAE)¹

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(with two text-figures)

Two new species of the genus *Sphedanolestes* Stal, namely *Sphedanolestes nigrocephala* sp. nov. and *Sphedanolestes bicolorous* sp. nov. from Southern India have been described and illustrated.

INTRODUCTION

The genus *Sphedanolestes*, under the division Harpactoraria, includes species with head as long as pronotum and posterior lobe of the latter longitudinally impressed. Distant (1904 and 1910) recognised 19 species from the Oriental region, mostly from northern India and Burma: *S. stigmatellus*, *S. signatus*, *S. variabilis*, *S. aterrimus* and *S. fraterculus* are the five species so far known from southern India, mostly from Nilgiri Hills. At present three more species, namely *S. dives*, *S. indicus* and *S. pulchriventris* have been recorded for the first time in Southern India. Without any exception, all are alate, arboreal, and endemic to the tropical rain forests of this region. Now two more species have been added to the list of *Sphedanolestes* of this region.

1. *Sphedanolestes nigrocephala* sp. nov. (Fig. 1)

FEMALE: Length 7.5 mm; width across the abdomen 2 mm; macropterous; oblongly elongate, golden yellow; antennae, tibiae, dorsal surface of the postocular area in between and around the ocelli, clypeus, antenniferous tubercles, scape, posterior margin of the frons, eyes, dorsum of the abdomen behind the fifth segment, ventral surface of the genital segments, tibiae, tarsomeres and membrane, piceous; sternites of the fifth to seventh abdominal segments, canescent; head elongately ovate, anteocular area a little shorter than postocular area; ocelli raised, interocular sulcus deep and dark; collar short, cylindrical; first rostral segment not passing the eyes and the second joint longest, almost as long as postocular area; scape almost as long as fore femora; anterior lobe of pronotum globose, smooth, with a median longitudinal narrow fissure not passing the anterior margin of the posterior lobe; junction of both lobes deeply constricted; antero-lateral ang-

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